

Amendment to the Claims:

This listing of claims will replace all prior listing of claims in this application.

Listing of Claims:

CLAIMS

1. (Currently amended) A Method method of self-supported transfer of a thin film ~~according to which~~, the method comprising:

- preparing a source substrate ~~is prepared~~[[.]];
- implanting at least a first species of ions or gas ~~in~~ at a first dose ~~is implanted in that~~ a source substrate at a given specified depth with respect to a face of ~~that the~~ source substrate, wherein that the first species ~~being adapted to generate~~ generates defects[[.]];
- applying a stiffener ~~is applied~~ in intimate contact with the source substrate,
- applying a heat treatment ~~is applied to that the~~ source substrate, at a ~~given~~ specified temperature for a ~~given~~ specified time, so as to create, substantially at the given depth, a buried weakened zone, without initiating ~~the~~ a thermal splitting of the thin film[[.]]; and
- applying a pulse of energy ~~is applied to that the~~ source substrate so as to provoke ~~the~~ a self-supported splitting of ~~a the~~ thin film delimited between the face of the source substrate and the buried weakened layer, with respect to ~~the~~ a remainder of the source substrate.

2. (Currently amended) The Method method according to claim 1, ~~characterized in that the~~ wherein applying a pulse of energy is applied comprises applying the pulse to ~~a small part~~ only a portion of the buried weakened layer.

3. (Currently amended) The Method method according to claim 2, ~~characterized in that~~ wherein the pulse of energy ~~is applied in the form of~~ comprises a localized thermal provision.

4. (Currently amended) The Method method according to claim 2, ~~characterized in that the~~ wherein applying a pulse of energy is applied comprises applying the pulse in

the form of a single brief movement ~~that is brief and~~ of small amplitude applied by means of a tool.

5. (Currently amended) ~~The Method~~ method according to claim 2, ~~characterized in that wherein applying the pulse the localized provision of energy is applied comprises in the form of a shock in shocking~~ a peripheral zone of the buried weakened ~~layer~~ zone.

6. (Currently amended) ~~The Method~~ method according to claim 1, ~~characterized in that the wherein applying a pulse of energy comprises applying a controlled energy pulse is applied globally to the source~~ substrate.

7. (Currently amended) ~~The Method~~ method according to ~~any one of claims 1 to 6~~ claim 1, ~~characterized in that the wherein applying a pulse of energy comprises applying a pulse is applied at a temperature at most equal to of no more than about 300°C.~~

8. (Currently amended) ~~The Method~~ method according to claim 7, ~~characterized in that wherein applying a pulse comprises applying the pulse is applied at room temperature.~~

9. (Currently amended) ~~The Method~~ method according to ~~any one of claims 1 to 8~~ claim 1, ~~characterized in that wherein applying a pulse of energy comprises conducting the a heat treatment is conducted so that the area opened up by the defects is from 25% to 32% of the total area of the weakened area in the substrate.~~

10. (Currently amended) ~~The Method~~ method according to claim 9, ~~characterized in that wherein applying a heat treatment comprises conducting the heat treatment is conducted so that the density of the defects is furthermore from 0.03 to 0.035 per square micron.~~

11. (Currently amended) ~~The Method~~ method according to claim 9 ~~or claim 10~~, ~~characterized in that wherein applying a heat treatment comprises conducting the heat treatment is conducted so that the size of the defects is furthermore of on the order of 7 to 8 square microns.~~

12. (Currently amended) ~~The Method~~ method according to ~~any one of claim 1 to 11, characterized in that~~ wherein apply the stiffener ~~with which the source substrate is placed in intimate contact,~~ comprises applying the stiffener at latest ~~at or before~~ the moment of applying the heat treatment, and wherein the stiffener comprises ~~is~~ a target substrate, the heat treatment contributing to improving the bonding energy between ~~these substrates~~ source substrate and the target substrate.

13. (Currently amended) ~~The Method~~ method according to claim 12, ~~characterized in that~~ wherein the target substrate ~~is of~~ comprises an amorphous material.

14. (Currently amended) ~~The Method~~ method according to claim 12, ~~characterized in that~~ wherein the source substrate ~~is of~~ comprises silicon and the target substrate ~~is of~~ comprises fused silica.

15. (Currently amended) ~~The Method~~ method according to claim 12, ~~characterized in that~~ wherein the target substrate ~~is of~~ comprises a monocrystalline or polycrystalline material.

16. (Currently amended) ~~The Method~~ method according to claim 15, ~~characterized in that~~ wherein the target substrate ~~is of~~ comprises silicon.

17. (Currently amended) ~~The Method~~ method according to ~~any one of claims claim 1 to 16,~~ wherein the first species ~~is~~ comprises hydrogen.

18. (Currently amended) ~~The Method~~ method according to claim 17, ~~characterized in that~~ wherein the first species ~~is hydrogen of~~ comprises singly ionized hydrogen H^+ type.

19. (Currently amended) ~~The Method~~ method according to claim 18, ~~characterized in that~~ wherein ~~implanting a the first species is implanted~~ comprises implanting at a dose of on the order of ~~a few at least about~~ 10^{16} H/cm².

20. (Currently amended) ~~The Method~~ method according to ~~any one of claims 1 to 19~~ claim 1, ~~characterized in that there is further comprising implanted~~ implanting a

second species, ~~in at~~ a second dose, ~~this wherein the~~ second species ~~being adapted to occupy occupies~~ the defects generated by the first species.

21. (Currently amended) ~~The Method~~ method according to claim 20, ~~characterized in that, in the case of implanting two species, wherein the first and second species are implanted at differing implant depths, and wherein the deeper profile implant is implanted first.~~

22. (Currently amended) ~~The Method~~ method according to claim 20 ~~or claim 21,~~ ~~characterized in that the~~ wherein implanting a second species second species is comprises implanting helium.

23. (Currently amended) ~~The Method~~ method according to claim 22, ~~characterized in that wherein implanting the second species is implanted comprises implanting at a dose of the order of few 10^{16} He/cm², less than the dose of the first species dose.~~

24. (Currently amended) ~~The Method~~ method according to ~~any one of claims 1 to 23~~ claim 1, ~~characterized in that the~~ wherein preparing a source substrate ~~is prepared comprises preparing a substrate from a material chosen from comprising one of~~ semiconductors and insulators, monocrystalline, polycrystalline or amorphous materials.

25. (Currently amended) ~~The Method~~ method according to claim 24, ~~characterized in that wherein the source substrate is prepared from a material chosen from the~~ comprises a group IV semiconductors semiconductor.

26. (Currently amended) ~~The Method~~ method according to claim 25, ~~characterized in that wherein the source substrate is made from~~ comprises silicon.

27. (Currently amended) ~~The Method~~ method according to claim 24, ~~characterized in that wherein the source substrate is made of~~ comprises germanium.

28. (Currently amended) ~~The Method~~ method according to claim 24, ~~characterized in that wherein the source substrate is made of AsGa~~ comprises GaAs.

29. (Currently amended) ~~The Method~~ method according to ~~any one of claims 1 to 28~~ claim 1, ~~characterized in that the~~ wherein applying a pulse of energy comprises performing a heat treatment ~~is performed~~ at a temperature ~~chosen in the range of~~ 200°C[[-]] to 400°C.

30. (Currently amended) ~~The Method~~ method according to claim 29, ~~characterized in that~~ wherein the heat treatment is performed at a temperature ~~chosen in the range of~~ 300°C[[-]] to 350°C.

31. (Currently amended) ~~The Method~~ method according to claim 29 ~~or claim 30~~, ~~characterized in that~~ wherein the heat treatment is ~~conducted~~ performed for approximately 2 hours to 5 hours.

32. (Currently amended) ~~The Method~~ method according to claim 24 ~~characterized in that the source substrate is prepared from~~ comprises a type III-V semiconductor material ~~of type III-V~~.

33. (Currently amended) ~~The Method~~ method according to claim 32, ~~characterized in that~~ wherein the source substrate ~~is prepared from~~ comprises an insulator ~~chosen~~ selected from the group consisting of LiNbO_3 and LiTaO_3 .